

THIN BED MEMBRANE-ASSISTED MASH FILTER

Already in 1901, Meura introduced the mash filter in the brewing world. Nearly 120 years later, with the Meura2001 hybrid, this technology is present in the brewing industry like never before!

Today, about 25% of the global beer volume is produced in a brewhouse equipped with a Meura2001. A remarkable figure for a technology that has been industrialised only since 1989!

The last two decades, several major improvements have been made on the Meura2001. The current design is the so-called **Meura2001 Hybrid**. It **simultaneously** delivers the following unique performances:

High productivity (≥ 14 brews per day)

AND

High extract yield ($\geq$ to laboratory yield)

AND

Very bright wort (Imhoff < 5 ml/l)

AND

High gravity wort ($> 17^{\circ}\text{P}$ cold wort, without weak wort recovery)

In addition, less than 2.2 liters of sparging water per kilo of malt is needed, which means short sparging cycles and thus **a high quality wort**. A single filter can take throws of up to 18 tons of malt equivalent.

The Meura2001 Hybrid is also very suitable for brewing with adjuncts. There are industrial applications with **almost all kinds of malted and unmalted grains**.



CONTINUOUS IMPROVEMENTS

Brewhouse suppliers are continuously challenged to develop technologies improving the extract yields, the productivity and the wort quality while increasing the wort gravity. Further, there is a worldwide tendency to use local raw materials replacing partly or entirely the malted barley.

Over the years, Meura constantly improved the Meura2001 design. An overview of **the major developments from the last years:**

- ▶ A major step has been made in the year 2010 with the introduction of the Hybrid chambers. It concerns a conceptual change in the filter plate design improving the homogeneity of the cake and thus resulting in an improved sparging efficiency of the filter cake.
- ▶ Of course, a brewery expects that a Meura2001 keeps its high efficiency all the year round even when raw materials or recipes are changing. To answer this demand, Meura introduced the Ilobox, an auto-adaptive fine tuning of the operational parameters of the Meura2001.
- ▶ To continuously improve the Total Cost of Ownership (TCO) of Meura2001, Meura improved the membrane design and materials, **introduced the Membrane Vacuum Device (MVD)**. The vacuum provided by the MVD is keeping the membrane against the chamber. In this way, a regular filling pattern of the chamber is obtained resulting in a homogeneous filter bed required for an efficient filtration and sparging. The system also improves the lifetime of the membrane and thus the TCO of the entire technology.
- ▶ The Meura2001 Hybrid with a fixed number of chambers has a flexibility in throw from -20% up to +10% around the nominal throw. In case more flexibility is required, **Meura's intercalary plate** is available to further adapt the throw capacity of a Meura2001 Hybrid

ADVANTAGES

This leads to a wide range of advantages:

- ▶ High productivity (≥ 14 brews per day)
- ▶ High extract yield ($\geq$ to laboratory yield)
- ▶ Very bright wort (Imhoff $< 5\text{ml/l}$)
- ▶ High gravity wort ($> 17^\circ\text{P}$ cold wort, without weak wort recovery)
- ▶ Low sparging ratio (below 2.2 l/kg), which means an improved wort quality
- ▶ A single filter up to 18 tons of malt throw
- ▶ Possibility to use all kind of raw materials
- ▶ Flexibility in throw of -20% up to +10% around the nominal throw
- ▶ Possibility to use the intercallary plate

All these advantages currently make the MEURA2001 HYBRID the best and most efficient mash filter in the world!